

Title: **JP5292427A2: EXTERNAL AUDIO INPUT CIRCUIT**

Derwent Title: External sound signal input circuit for TV receiver - has non-aural sound input selection switch integral with either right-channel or left-channel sound signal input terminals NoAbstract [\[Derwent Record\]](#)

Country: JP Japan

Kind: A (See also: [JP7001674U2](#) )

Inventor: UEMURA HIDEO;

Assignee: MATSUSHITA ELECTRIC IND CO LTD

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Application Number: **JP1992000088521**

IPC Code: **H04N 5/60; H04N 5/44;**

Priority Number: 1992-04-09 **JP1992000088521**

Abstract: PURPOSE: To facilitate circuit configuration while providing a monaural audio input switching circuit and an external audio input switching circuit by limiting either right or left terminal as a monaural audio input terminal.

CONSTITUTION: When a connecting terminal is inserted to a right audio input terminal 11, a monaural setting switch 13 is opened and connection from a left audio input terminal 12 is opened. Therefore, when the connecting terminal is connected to the right audio input terminal 11, the monaural setting switch 13 is turned to the opened state, and right and left audio signals are independently turned to a stereo input state. However, when the terminal is not connected to the right audio input terminal 11, right and left audio signals are short-circuited, and the audio signals inputted from the left audio input terminal 12 are outputted to right and left. When the connecting terminal is not inserted to the left audio input terminal 12, an external input discriminating switch 14 is closed and connected through a terminal resistor 16, a switching circuit 7 is closed on the side of (b), and the external input is turned to an invalid state. When the connecting terminal is connected to this left audio input terminal 12, the external input audio is made valid.

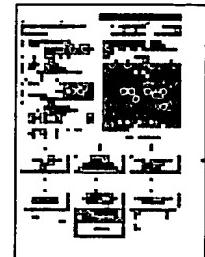
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Family:

PDF	Publication	Pub. Date	Filed	Title
<input checked="" type="checkbox"/>	JP7001674U2	1995-01-10	1992-11-10	
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Other Abstract Info: DERABS G93-391313 DERRG93-391313

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**DETAILED DESCRIPTION**

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the external voice input circuit which constitutes a monophonic voice input change over circuit and an external voice input change over circuit with the switch interlocked with a voice input terminal on either side.

[0002]

[Description of the Prior Art] In recent years, in the television set, devices equipped with an external input terminal are increasing in number for connection with other devices. Hereafter, the conventional external voice input circuit is explained.

[0003] Drawing 2 shows the circuitry of the conventional external voice input circuit. In drawing 2, 21 is a right voice input terminal and 22 is a left voice input terminal. The monophonic configuration switch by which 23 was interlocked with the right voice input terminal 21, and 24 are the monophonic configuration switches interlocked with the left voice input terminal 22. The external input distinction switch with which 25 was interlocked with the right voice input terminal 21, and 26 are the external input distinction switches interlocked with the left voice input terminal 22. It is the diode which constitutes the OR circuit of the change over signal with which the change-over switch to which 27 operates with the change over signal from the external input distinction switches 25 and 26, and 28 and 29 are outputted from the power supply pull-up resistor of a change over signal, and 30 and 31 are outputted from the external input distinction switches 25 and 26.

[0004] About the external voice input circuit constituted as mentioned above, the actuation is explained below. The monophonic configuration switch 23 is an interlock switch constituted so that it might open, if an end-connection child was inserted in the right voice input terminal 21, and if the monophonic configuration switch 23 opens, the connection from the left voice input terminal 22 will be opened wide. Similarly, the monophonic configuration switch 24 is an interlock switch constituted so that it might open, if an end-connection child was inserted in the right voice input terminal 22, and if the monophonic configuration switch 24 opens, the connection from the left voice input terminal 21 will be opened wide. Therefore, only when an end-connection child is connected to right voice input terminal 21 and left voice input terminal 22 both sides and the monophonic configuration switch 23 and 24 both sides change into an open condition, a sound signal on either side will be in a stereo voice input condition independently. When an end-connection child is connected to either the right voice input terminal 21 or the left voice input terminal 22 here, a sound signal on either side is short-circuited, and is outputted to both right and left. When an end-connection child is not inserted in the right-and-left voice input terminals 21 and 22 which make connection with a monophonic voice device easy by this, the external input distinction switches 25 and 26 will be closed and grounded, and, as for the change over circuit 27, closing external input voice will be in an invalid state at the b side. If an end-connection child is inserted in the right voice input terminal 21, through an aperture, a pull-up resistor 28, and diode 30, change over voltage will be supplied to the change over circuit 27, and, in the change over circuit 27, the external input distinction switch 25 will become effective [ closing external input voice ] at the a side. Moreover, when an end-connection child is inserted in the left voice input terminal 22, through the aperture pull-up resistor 29 and diode 31, change over voltage is supplied to the change over circuit 27, and, as for closing external input voice, in the change over circuit 27, the external input distinction switch

25 is effective at the a side similarly. Here, the circuit of an OR is constituted from diodes 30 and 31, and if an end-connection child is inserted in either the right voice input terminal 21 or the left voice input terminal 22, it constitutes so that right and left may switch to the external voice input terminal side a.

[0005]

[Problem(s) to be Solved by the Invention] However, in the above-mentioned conventional circuitry, circuitry needed to become complicated and two interlock switches needed to be formed in the voice input terminal again. This invention aims at offering the external voice input change over circuit which solves the above-mentioned conventional trouble and can be constituted easily.

[0006]

[Means for Solving the Problem] It is circuitry to which an external voice input circuit of this invention limits only one of the right-and-left voice input terminals to a terminal corresponding to monophonic voice input in order to attain this purpose.

[0007]

[Function] The external voice input circuit which can constitute the switch interlocked with an external input terminal from one piece, and has a monophonic voice input change over circuit and an external voice input change over circuit by easy circuitry by this configuration can be constituted.

[0008]

[Example] Hereafter, it explains, referring to a drawing about one example of this invention. In drawing 1, 11 is a right voice input terminal and 12 is a left voice input terminal. The monophonic configuration switch by which 13 was interlocked with the right voice input terminal 11, and 14 are the external input distinction switches interlocked with the left voice input terminal 12. 15 is the terminator of a right voice input terminal, and 16 is the terminator of a left voice input terminal. The change-over switch to which 17 operates with the change over signal from the external input distinction switch 14, and 18 are the power supply pull-up resistors of a change over signal.

[0009] About the external voice input circuit constituted as mentioned above, the actuation is explained below. The monophonic configuration switch 13 is an interlock switch constituted so that it might open, if an end-connection child was inserted in the right voice input terminal 11, and if the monophonic configuration switch 13 opens, the connection from the left voice input terminal 12 will be opened wide. Therefore, when an end-connection child is connected to the right voice input terminal 11, the monophonic configuration switch 13 will be in an open condition, and a sound signal on either side will become independent, and will be in a stereo input state. However, when a terminal is not connected to the right voice input terminal 11, the sound signal which short-circuited the sound signal on either side, and was inputted from the left voice input terminal 12 will be outputted to both right and left. If it corresponds to connection with a monophonic voice device and an end-connection child is inserted in the right voice input terminal 11 when inserting an end-connection child in the left voice input terminal 12 as mentioned above, monophonic voice correspondence will be canceled.

[0010] When an end-connection child is not inserted in the left voice input terminal 12, the external input distinction switch 14 will be closed, and will be grounded through a terminator 16, and, as for the change over circuit 27, a closing external input will be in an invalid state at the b side. If an end-connection child is inserted in the left voice input terminal 12, as for the external input distinction switch 14, change over voltage will be supplied through an aperture and a pull-up resistor 18 in the change over circuit 17, and the change over circuit 27 will become effective [ closing external input voice ] at the a side.

[0011]

[Effect of the Invention] above -- this invention -- right and left -- easy circuitry can be made possible, having a monophonic voice input change over circuit and an external voice input change over circuit as usual by limiting one of terminals with the terminal corresponding to monophonic voice input.

[Translation done.]

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CLAIMS

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[Claim(s)]

[Claim 1] An external voice input circuit characterized by equipping a right-and-left voice input terminal with one interlock switch respectively, constituting a monophonic voice input change over circuit from one interlock switch of left or a right voice input terminal, and constituting an external voice input change over circuit from an interlock switch of another side.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] The external voice input change over circuit of one example of this invention

[Drawing 2] The conventional external voice input change over circuit

[Description of Notations]

- 11 Right Voice Input Terminal
- 12 Left Voice Input Terminal
- 13 Monophonic Configuration Switch
- 14 External Input Distinction Switch
- 15 Terminator
- 16 Terminator
- 17 Change-over Switch
- 18 Pull-up Resistor

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[Translation done.]

\* NOTICES \*

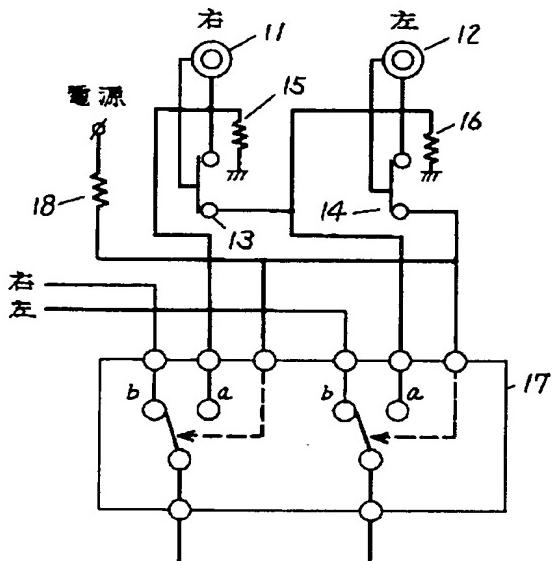
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DRAWINGS

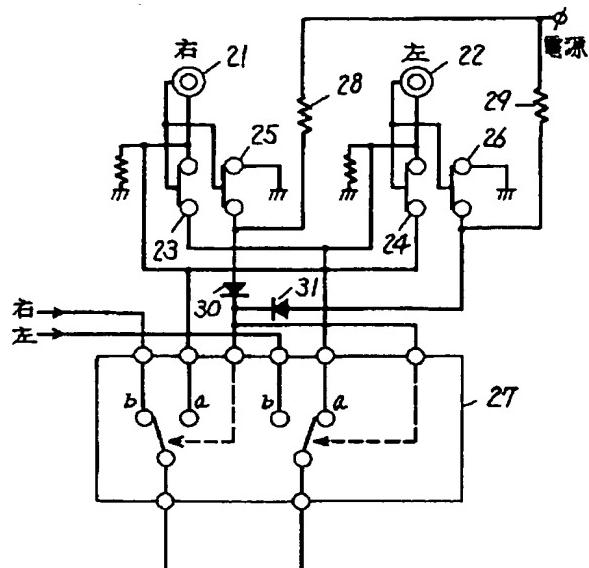
[Drawing 1]

11 右音声入力端子  
 12 左音声入力端子  
 13 モノラル設定スイッチ  
 14 外部入力判別スイッチ  
 15, 16 終端抵抗  
 17 切換スイッチ  
 18 プルアップ抵抗



[Drawing 2]

- 21 右音声入力端子  
22 左音声入力端子  
23, 24 モノラル設定スイッチ  
25, 26 外部入力判別スイッチ  
27 切換スイッチ  
28, 29 ブルアップ抵抗  
30, 31 ダイオード



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# PATENT ABSTRACTS OF JAPAN

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(21)Application number : 04-088521 (71)Applicant : MATSUSHITA ELECTRIC IND CO LTD

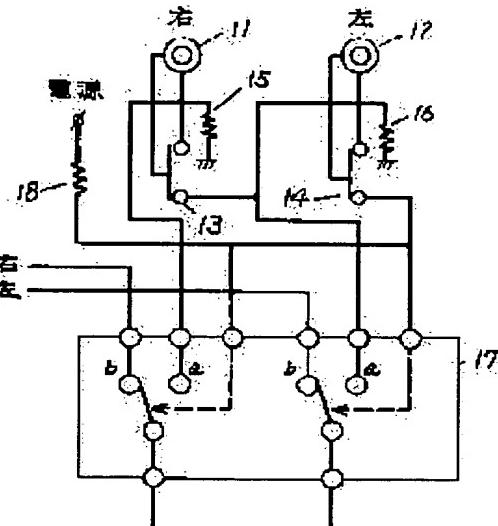
(22)Date of filing : 09.04.1992 (72)Inventor : UEMURA HIDEO

## (54) EXTERNAL AUDIO INPUT CIRCUIT

### (57)Abstract:

**PURPOSE:** To facilitate circuit configuration while providing a monaural audio input switching circuit and an external audio input switching circuit by limiting either right or left terminal as a monaural audio input terminal.

**CONSTITUTION:** When a connecting terminal is inserted to a right audio input terminal 11, a monaural setting switch 13 is opened and connection from a left audio input terminal 12 is opened. Therefore, when the connecting terminal is connected to the right audio input terminal 11, the monaural setting switch 13 is turned to the opened state, and right and left audio signals are independently turned to a stereo input state. However, when the terminal is not connected to the right audio input terminal 11, right and left audio signals are short-circuited, and the audio signals inputted from the left audio input terminal 12 are outputted to right and left. When the connecting terminal is not inserted to the left audio input terminal 12, an external input discriminating switch 14 is closed and connected through a terminal resistor 16, a switching circuit 7 is closed on the side of (b), and the external input is turned to an invalid state. When the connecting terminal is connected to this left audio input terminal 12, the external input audio is made valid.



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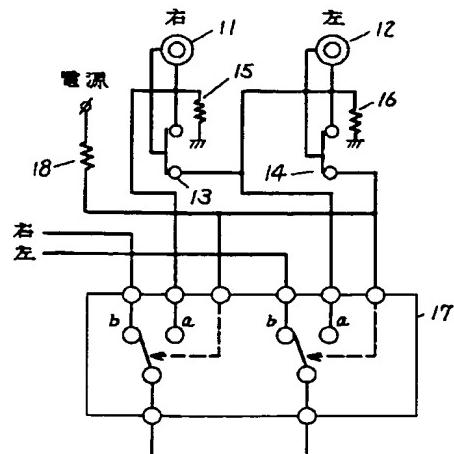
(54)【発明の名称】 外部音声入力回路

(57)【要約】

【目的】 本発明はテレビジョン受信機等の外部音声入力回路において簡単な回路構成でモノラル機器との接続を容易とするモノラル音声入力切換回路と外部音声に切り換える外部音声入力切換回路を有した外部音声入力回路を構成する事を目的としている。

【構成】 左右音声入力端子の一方をモノラル音声入力対応端子と限定し左右音声入力端子の連動スイッチの一方をモノラル音声入力切換回路に他方を外部入力切換回路に用いる事によって音声入力端子の連動スイッチが左右双方1個で構成出来る、簡単な回路構成とする。

- 11 右音声入力端子
- 12 左音声入力端子
- 13 モノラル設定スイッチ
- 14 外部入力判別スイッチ
- 15, 16 終端抵抗
- 17 切換スイッチ
- 18 プルアップ抵抗



## 【特許請求の範囲】

【請求項1】 左右音声入力端子に連動スイッチを各々1個備え、左又は右音声入力端子の一方の連動スイッチでモノラル音声入力切換回路を、他方の連動スイッチで外部音声入力切換回路を構成することを特徴とする外部音声入力回路。

## 【発明の詳細な説明】

## 【0001】

【産業上の利用分野】 本発明は、左右の音声入力端子に連動するスイッチによってモノラル音声入力切換回路と外部音声入力切換回路を構成する外部音声入力回路に関するものである。

## 【0002】

【従来の技術】 近年、テレビジョン受信機等では他の機器との接続の為、外部入力端子を備える機器が増えている。以下、従来の外部音声入力回路について説明する。

【0003】 図2は従来の外部音声入力回路の回路構成を示すものである。図2において、21は右音声入力端子、22は左音声入力端子である。23は右音声入力端子21に連動したモノラル設定スイッチ、24は左音声入力端子22に連動したモノラル設定スイッチである。25は右音声入力端子21に連動した外部入力判別スイッチ、26は左音声入力端子22に連動した外部入力判別スイッチである。27は外部入力判別スイッチ25、26からの切換信号によって動作する切換スイッチ、28及び29は切換信号の電源ブルアップ抵抗、30及び31は外部入力判別スイッチ25、26より出力される切換信号の論理和回路を構成するダイオードである。

【0004】 以上のように構成された外部音声入力回路について、以下その動作を説明する。モノラル設定スイッチ23は右音声入力端子21に接続端子が挿入されると開くように構成された連動スイッチであり、モノラル設定スイッチ23が開くと左音声入力端子22からの接続が開放される。同様にモノラル設定スイッチ24は右音声入力端子22に接続端子が挿入されると開くように構成された連動スイッチであり、モノラル設定スイッチ24が開くと左音声入力端子21からの接続が開放される。よって右音声入力端子21および左音声入力端子22双方に接続端子が接続されモノラル設定スイッチ23および24双方が開放状態となった場合のみ左右の音声信号は独立してステレオ音声入力状態となる。ここで右音声入力端子21および左音声入力端子22のどちらか一方にのみ接続端子が接続された場合には左右の音声信号は短絡し左右双方に出力される。これによってモノラル音声機器との接続を容易にしている左右音声入力端子21、22に接続端子が挿入されない場合は外部入力判別スイッチ25、26は閉じて接地され、切換回路27はb側に閉じて外部入力音声は無効状態となる。右音声入力端子21に接続端子が挿入されると外部入力判別スイッチ25は開き、ブルアップ抵抗28、ダイオード3

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0を経て切換電圧が切換回路27に供給されて、切換回路27はa側に閉じて外部入力音声は有効となる。また、左音声入力端子22に接続端子が挿入された場合も同様に外部入力判別スイッチ25が開きブルアップ抵抗2

9、ダイオード31を経て切換電圧が切換回路27に供給され切換回路27はa側に閉じて外部入力音声は有効状態となる。ここで、ダイオード30、31で論理和の回路を構成しており、右音声入力端子21又は左音声入力端子22のどちらか一方に接続端子が挿入されると左右共に外部音声入力端子側aに切り換わるように構成している。

## 【0005】

【発明が解決しようとする課題】 しかしながら上記した従来の回路構成では、回路構成が複雑となり又音声入力端子に連動スイッチを2個設ける必要が生じていた。本発明は、上記従来の問題点を解決し容易に構成できる外部音声入力切換回路を提供することを目的としている。

## 【0006】

【課題を解決するための手段】 この目的を達成するために本発明の外部音声入力回路は左右音声入力端子のどちらか一方のみをモノラル音声入力対応端子に限定する回路構成。

## 【0007】

【作用】 この構成によって、外部入力端子に連動するスイッチを1個で構成でき、簡単な回路構成でモノラル音声入力切換回路と外部音声入力切換回路を有する外部音声入力回路を構成できる事となる。

## 【0008】

【実施例】 以下、本発明の一実施例について図面を参照しながら説明する。図1において、11は右音声入力端子、12は左音声入力端子である。13は右音声入力端子11に連動したモノラル設定スイッチ、14は左音声入力端子12に連動した外部入力判別スイッチである。15は右音声入力端子の終端抵抗、16は左音声入力端子の終端抵抗である。17は外部入力判別スイッチ14からの切換信号によって動作する切換スイッチ、18は切換信号の電源ブルアップ抵抗である。

【0009】 以上のように構成された外部音声入力回路について、以下その動作を説明する。モノラル設定スイッチ13は右音声入力端子11に接続端子が挿入されると開くように構成された連動スイッチであり、モノラル設定スイッチ13が開くと左音声入力端子12からの接続が開放される。よって右音声入力端子11に接続端子が接続された場合にはモノラル設定スイッチ13が開放状態となり左右の音声信号は独立してステレオ入力状態となる。しかし、右音声入力端子11に端子が接続されない場合には左右の音声信号は短絡し左音声入力端子12より入力された音声信号は左右双方に出力される事となる。以上のように左音声入力端子12に接続端子を挿入する場合にモノラル音声機器との接続に対応し、右音声

入力端子 11 に接続端子を挿入するとモノラル音声対応を解除する。

【0010】左音声入力端子 12 に接続端子が挿入されない場合は、外部入力判別スイッチ 14 は閉じて終端抵抗 16 を経て接地され、切換回路 27 は b 側に閉じ外部入力は無効状態となる。左音声入力端子 12 に接続端子が挿入されると外部入力判別スイッチ 14 は開き、ブルアップ抵抗 18 を経て切換回路 17 に切換電圧が供給されて、切換回路 27 は a 側に閉じ外部入力音声は有効となる。

【0011】

【発明の効果】以上のように本発明は、左右どちらかの端子をモノラル音声入力対応端子と限定することにより従来と同様にモノラル音声入力切換回路と外部音声入力\*

\* 切換回路を有しながら容易な回路構成を可能とすることが出来る。

#### 【図面の簡単な説明】

【図1】本発明の一実施例の外部音声入力切換回路

【図2】従来の外部音声入力切換回路

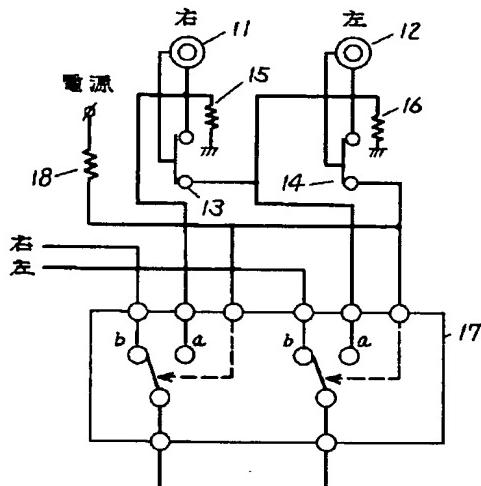
#### 【符号の説明】

- 11 右音声入力端子
- 12 左音声入力端子
- 13 モノラル設定スイッチ
- 14 外部入力判別スイッチ
- 15, 16 終端抵抗
- 17 切換スイッチ
- 18 ブルアップ抵抗

10

【図1】

- 11 右音声入力端子
- 12 左音声入力端子
- 13 モノラル設定スイッチ
- 14 外部入力判別スイッチ
- 15, 16 終端抵抗
- 17 切換スイッチ
- 18 ブルアップ抵抗



- 21 右音声入力端子
- 22 左音声入力端子
- 23, 24 モノラル設定スイッチ
- 25, 26 外部入力判別スイッチ
- 27 切換スイッチ
- 28, 29 ブルアップ抵抗
- 30, 31 ダイオード

